



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/810,810 | 03/16/2001 | Graeme N. McClure | ABMS-0119/B000330 | 6799 |

23377 7590 09/24/2003

WOODCOCK WASHBURN LLP
ONE LIBERTY PLACE, 46TH FLOOR
1650 MARKET STREET
PHILADELPHIA, PA 19103

EXAMINER

DOUGHERTY, ANTHONY T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2863

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/810,810

Applicant(s)

MCCLURE ET AL.

Examiner

Anthony T. Dougherty

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-12 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-12 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, and 4 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,768,079 to Buell in view of U.S. Patent No. 3,558,985 to Krolski et al.

With regard to claim 1, the primary reference to Buell discloses monitoring three phases of a power line (see column 3 line 47 through line 67), determining a number of faults in the three phases (see column 5 line 15 through line 34) and opening a number of phases on a power line based on the determined number of faults (see column 5 line 35 through line 47), and if only one fault is determined monitoring the fault to determine if the fault evolves into another phase and if so opening all three phases of the recloser (see column 5 line 48 through line 56 & column 6 line 8 through line 13 & column 10 line 11 through line 31). However, Buell fails to disclose a fault occurs when a protection element on the recloser enters pickup.

The secondary reference to Krolski et al. discloses a fault occurs when a predetermined overcurrent is sensed in one or more of the phases by an overcurrent sensing portion (i.e. a protection element enters pickup – see column 3 line 24 through line 30 and Figure 1 items 6, 6', and 6'').

Art Unit: 2863

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have specified the fault occurrence condition of Krolski et al. be utilized to indicate a fault in the present application.

Accordingly, such a modification would have been obvious since Krolski et al. indicates that a protection element entering pickup (which is understood by the examiner to be the same as an overcurrent condition based on what is commonly known in the art) was a well known and valid means for determining a fault condition, furthermore an overcurrent condition can cause damage to the power distribution system and to end user appliances connected to the power system suggesting that an overcurrent condition is contrary to the desired operation of the power system and thus indicative of a fault (see Krolski et al. column 1 line 10; Buell column 1 line 1 through line 2 and column 1 line 18 through line 64), thereby suggesting the obviousness of the modification.

With regard to claim 3 and applying the rejection of claim 1 above, the primary reference to Buell discloses comparing a line current of each of the three phases to a predetermined current (see column 4 line 64 through line 67 and column 5 line 35 through 39) if this current exceeds the predetermined current then a fault has occurred (see column 5 line 42 through line 46).

With regard to claim 4 and applying the rejection of claim 1 above, Buell discloses detecting a fault in one of three phases (see column 5 line 15 through line 19), starting a countdown timer associated with each faulted phase (see column 5 line 19 through line 21), and

Art Unit: 2863

determining the number of faults still present after the timer has expired (see column 5 line 21 through line 34).

3. Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,768,079 to Buell in view of U.S. Patent No. 3,558,985 to Krolski et al. as applied to claim 1 above, and further in view of U.S. Patent No. 2,320,861 to Goldsborough et al.

With regard to claim 6 and applying the rejection of claim 1 above the primary reference to Buell fails to disclose fails to disclose opening a number of phases responsive to the determined number of faults comprises opening only one phase if only one fault is determined, the only one phase being associated with the fault, and opening all three phases if more than one fault is determined.

The secondary reference to Goldsborough et al. discloses opening one phase if only one fault is determined and opening all three phases if more than one fault is determined (see page 5, right hand column line 46 through line 72).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have specified the single-pole protective system described in Goldsborough et al. be used in the protection system of the current application.

Accordingly, such a modification would have been obvious since most faults in a three phase system are single phase faults (see Goldsborough et al. page 1, right hand column line 9 through line 20) and any time more than one phase is opened in a three phase system the resulting power delivered on a single phase is negligible to an end user (see Goldsborough et al.

Art Unit: 2863

page 7, right hand column line 3 through line 12), thereby suggesting the obviousness of the modification.

4. Claims 7-12 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,768,079 to Buell in view of U.S. Patent No. 2,320,861 to Goldsborough et al.

With regard to claims 7 and 10, the primary reference to Buell discloses monitoring three phases of a power line (see column 3 line 47 through line 67), determining a number of faults in the three phases (see column 5 line 15 through line 34) and opening a number of phases on a power line based on the determined number of faults (see column 5 line 35 through line 47) and if only one fault is determined monitoring the fault to determine if the fault evolves into another phase and if so opening all three phases of the recloser (see column 5 line 48 through line 56 & column 6 line 8 through line 13 & column 10 line 11 through line 31). However, Buell fails to disclose opening a number of phases responsive to the determined number of faults comprises opening only one phase if only one fault is determined, the only one phase being associated with the fault, and opening all three phases if more than one fault is determined.

The secondary reference to Goldsborough et al. discloses opening one phase if only one fault is determined and opening all three phases if more than one fault is determined (see page 5, right hand column line 46 through line 72).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have specified the single-pole protective system described in Goldsborough et al. be used in the protection system of the current application.

Art Unit: 2863

Accordingly, such a modification would have been obvious since most faults in a three phase system are single phase faults (see Goldsborough et al. page 1, right hand column line 9 through line 20) and any time more than one phase is opened in a three phase system the resulting power delivered on a single phase is negligible to an end user (see Goldsborough et al. page 7, right hand column line 3 through line 12), thereby suggesting the obviousness of the modification.

With regard to claims 8 and 11, and applying the rejection of claims 7 and 10 (respectively) above, the primary reference to Buell discloses comparing a line current of each of the three phases to a predetermined current (see column 4 line 64 through line 67 and column 5 line 35 through 39) if this current exceeds the predetermined current then a fault has occurred (see column 5 line 42 through line 46).

With regard to claims 9 and 12 and applying the rejection of claims 7 and 10 (respectively) above, the primary reference to Buell discloses detecting a fault in one of three phases (see column 5 line 15 through line 19), starting a countdown timer associated with each faulted phase (see column 5 line 19 through line 21), and determining the number of faults still present after the timer has expired (see column 5 line 21 through line 34).

With regard to claim 14, 15, and 16, and applying the rejections of claims 1, 10, and 14 above (respectively) above, the primary reference to Buell discloses controlling the recloser to do at least one of trip, reclose, or lockout (see column 6 line 1 through line 32), responsive to the

Art Unit: 2863

fault being detected (see column 5 line 48 through line 56) on one phase independently (see column 9 line 25 through line 32), two phases sequentially (see column 5 line 48 through line 56 & column 6 line 8 through line 13), or three phases simultaneously (see column 10 line 11 through line 31).

5. Applicant's arguments filed September 8th 2003 have been fully considered but they are not persuasive. Addressing applicants arguments of paragraphs 4 and 5 of page 5 of Amendment A - it is clear that Buell discloses if only one fault is determined monitoring the fault to determine if it evolves into another phase (see Buell column 6 line 8 through line 13) and if so opening all three phases of the recloser (see column 5 line 48 through line 56 & column 6 line 8 through line 13 & column 10 line 11 through line 31).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,912,591 to LeCourt because it teaches a recloser control with timers and counters before opening a phase.

U.S. Patent No. 2,539,416 to Goldsborough et al. because it teaches a recloser for a three phase system that uses current level determination to trip either a single phase if one phase is in fault or all three phases if more than one phase is in fault (see column 6 line 38 through line 51).

Art Unit: 2863


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony T. Dougherty whose telephone number is (703) 305-4020. The examiner can normally be reached on Monday through Friday from 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



atd
September 22, 2003



John Barlow
Supervisory Patent Examiner
Technology Center 2800